

PO No	Supplier	Line Item No	Rei No	Terms	Purchased Item	Descripțion	For Part No	Project	Equipment ID	Order Qty	Due Date	Received Quantity	Accounting Job No	Serial No	Status	Receive Date	Price/Unit	Aging Days	Past Due	Total	Supplie Name
0038311	ACI001- VC	3	1	Net 30	M1018A3.000W.250	1018 Angle 3.00"" X0.250"" Wall MATERIAL: ANGLE 44W ACCEPTABLE				20	11/14/2017	20		S009407	Stock	11/13/2017	\$ 2.59 / ft	0		\$51.89	Acier Ouellett Inc.
		4				1010-1025 Steel Bar .375 X 5.000 : MATERIAL: AISI 1010- 1025 OR ASTM A36I/366I/A569I/A570 OR OR CSA G40-21 38W/44W/50W/60W/70W CSA G40-21 OR 38W/44W/50W/60W/70W receive ft				6	/	6		\$009408	Stock	11/13/2017	\$ 11.35 / ft	0		\$68.12	Acier Ouellet Inc.
		5			M1018R0.625	M1018R0.625 : MATERIAL: AISI 1018- 1025 ROUND BAR M1010S20GA AS PER MIL-S-7097 OR ASTM A108 receive ft				20 19,		20)	V	S009409	Stock	11/13/2017	\$ 1.04 / ft	0		\$20.79	Acier Ouellet Inc.
		6				AISI 4140 Quenched &Tempered Steel Round Bar 0.750"" Dia. AISI 4140 QUENCHED & TEMPERED AS PER ASTM 4140 QT OR ASTM 4142 QT				10		10		S009410	Stock	11/13/2017	\$ 2.99 / ft	0			Acier Ouellet Inc.
		7			V	AISI 4140 Quenched &Tempered Steel Round Bar 1.500"" Dia. AISI 4140 QUENCHED & TEMPERED AS PER ASTM 4140 QT OR ASTM 4142 QT				9.5		10		S009411	Stock	11/13/2017	\$ 9.85 / ft	0			Acier Ouellet Inc.
		9				AJSI 4140 Quenched &Tempered Steel Round Bar 1.750"" Dia. AISI 4140 QUENCHED & TEMPERED AS PER ASTM 4140 QT OR ASTM 4142 QT				5		5		S009412	Stock	11/13/2017	\$ 17.66 / ft	0			Acier Ouellet Inc.

Plex 11/13/2017 2:08 PM Dart Plouffe. Sonia



Dart Hawkesbury 1270 Aberdeen St Hawkesbury, ON K6A 1K7 Canada

# PURCHASE ORDER PO038311

Tel (613) 632-5200

Supplier: ACI001-VC

Acier Ouellette Inc. 935 Boul. Du Havre

Valleyfield QC

J6S 5L1 Canada Phone: 800 667 4248 Fax: 450 377 5696 PO No:

PO038311

PO Date:

11/9/17

Due Date:

11/14/17

**Purchase Order** 

Revision:

NOV 0 9 2 17

**Revision Date:** 

Ship-To Contact:

Lavoie, ChantalPhone:

clavoie@dartaero.com

Ship To:

1270 Aberdeen Street

Hawkesbury

ON

K6A 1K7 Canada Phone: 613-632-5200 Via:

Ground

Pymt Terms:

Net 30

Freight Terms:

Special Comments: QUOTATION # SOU0069540, SOU0069953,

SOU0069784.SOU0069784.SOU0068639

Line						Due	Order	Received		Unit	Extended
ltem	Part	Rev	Description	Item Tax	Status		Quantity		Balance	952033000000	Price
1	M5052H32S.063	-	5052-H32 .063 Sheet : MATERIAL: 5052-H32 ALUMINUM SHEET AS PER QQ-A-250/8 OR AMS-QQ-A-250/8 OR AMS 4016 OR ASTM B209 receive sf		Firmed	11/14/17	64 sf	0 sf	64 sf	\$3.7026562/sf	\$236.97
2	M4140HR0.375		4140 Round Bar .375 : AISI 4140H ROUND BAR PER AISI4140OR ASTM A304-02/-A-434- BC/-A193-03-GRADE B7/-A29-03/-A322-91 OR UNS#-G41400 MINIMUM ULTIMATE TENSILE STRENGTH=100 KSI MINIMUM YIELD TENSILE STRENGTH=66KSI receive ft		Firmed	11/14/17	12 ft	O ft	12 ft	\$10.41666/ft	\$125.00
3	M1018A3.000W.250 <sup>6</sup>		1018 Angle 3.00" X0.250" Wall MATERIAL: ANGLE 44W ACCEPTABLE		Firmed	11/14/17	20 ft	20F	€ 20 ft	\$2.5945/ft	\$51.89
4	M1018B0.375x5.000		1010-1025 Steel Bar .375 X 5.000 : MATERIAL: AISI 1010- 1025 OR ASTM A36/A366/A569/A570 OR OR CSA G40-21 38W/44W/50W/60W/70W CSA G40-21 OR 38W/44W/50W/60W/70W receive ft		Firmed	11/14/17	<b>∕</b> 6 ft	Off GFC	6 ft	\$11.3533/ft	\$68.12 -/3
5	M1018R0.625		M1018R0.625 : MATERIAL: AISI 1018- 1025 ROUND BAR		Firmed	11/14/17	/20 ft	0 ft	20 ft	\$1.0395/ft	\$20.79



Dart Hawkesbury 1270 Aberdeen St Hawkesbury, ON K6A 1K7 Canada

# PURCHASE ORDER PO038311

Tel (613) 632-5200

				Items							
Line Item	Part	Rev	Description	Item Tax	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extende Price
			M1010S20GA AS PER MIL-S-7097 OR ASTM A108 receive ft					/			
6	MT-4140QT-R0.750	3	AISI 4140 Quenched &Tempered Steel Round Bar 0.750" Dia. AISI 4140 QUENCHED & TEMPERED AS PER ASTM 4140 QT OR ASTM 4142 QT		Firmed	11/14/17	√10 ft	10Pt	10 ft	\$1.0395/ <del>R</del>	\$10.4
7	MT-4140QT-R1.500		AISI 4140 Quenched &Tempered Steel Round Bar 1.500" Dia. AISI 4140 QUENCHED & TEMPERED AS PER ASTM 4140 QT OR ASTM 4142 QT		Firmed	11/14/17	<i>,</i> €.7 ft	9,68	* 10 ft	\$9.8474/ft	\$95.52
8	MT-4140QT-R0.875	-	AISI 4140 Quenched &Tempered Steel Round Bar 0.875" Dia. AISI 4140 QUENCHED & TEMPERED AS PER ASTM 4140 QT OR		Firmed	11/14/17	10 ft	0 ft	10 ft	\$3.894/ft	\$38.94
9	MT-4140QT-R1.750	U	AISI 4140 Quenched &Tempered Steel Round Bar 1.750" Dia. AISI 4140 QUENCHED & TEMPERED AS PER ASTM 4140 QT OR ASTM 4142 QT		Firmed	11/14/17	<b>5</b> ft	5,2 <sup>A</sup>	E 5ft	\$17.66/ft	\$88.30
10	MT-HRS-R-7.000	-	Hot Rolled Steel Round Bar 7.000" dia. (cut to 3.5" length) material: hot rolled steel bar as per ASTM A36 or ASTM A1011 / 44W / ASTM A1018		Firmed	11/14/17	1.167 ft	O ft	1 ft	\$289.71594/ft	\$338.10

ine Item Note cut to size as per quote sou0069540 4 pcs cut at 3.500"

Grand Total: \$1,074.02

### **Order Notes**

**Procurement Quality Clauses** 

A005 right of entry

A012 chemical and physical test report

A016 personnel qualification

A017 raw material identification (as applicable)

A026 certification of material conformance

A041 quality management system

A042 dart notification by supplier

A043 retention of quality documents



Dart Hawkesbury 1270 Aberdeen St Hawkesbury, ON K6A 1K7 Canada

# PURCHASE ORDER PO038311

Tel (613) 632-5200

### **Order Notes**

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit <a href="https://www.dartaerospace.com">www.dartaerospace.com</a> for further explanation.

Plex 11/9/17 1:49 PM dart.lavoie.chantal



Order - Sales

Copy

CO00061364

Billed to 1270 , ABERDEEN ST. HAWKESBURY, Ontario, K6A 1K7 DART AEROSPACE LTD Shipped to , Ontario, 935, Boul. du Hâvre
Salaberry de Valleyfield (Québec) J6S 5L1
Tél.: 450-377-4248 Mtl: 514-336-4248 Ext.: 800-667-4248
Fax: 450-377-5696 Mtl: 514-336-4246 Ext.: 866-426-4242 Date Salesman Processed by Your order N° Delivery date Customer No 38311 CLI0001056 2017/11/10 Josianne Bourdon 2017/11/13

Att : CHANTAL LAVOIE Tél.: 613-632-5200 **Credit Terme** 

Carrier

**OUELLETTE VALLEYFIELD** 

Net 30 Days

	Delivery Route	S		Page			м				
Product Description	Weight	740	I/M		PCS NB	В		Internal Use Only	nal Us	e On	ıly
		413	0/13	CMD	EXP	B/0	N	-	S		OUT
ANGLE 3 X 3 X 1/4 RANDOM	98.00	20.00	20.00 PI_\$CLB	1.00					-	$\dashv$	
			1						_	_	

	Product Description Weight Qty U/M CMD EXP B/O IN	1 ANGLE 3 X 3 X 1/4 RANDOM 98.00 20.00 PI_\$CLB 1.00 A-3314-V 1131	EAT \ 520797	2 FLAT CR 3/8 X 5 1018 DANDOM 38.25 6.00 PI_\$CLB 1.00	2913	COUPE A LA SCIE	3 ROUND CR 5/8 1018 RANDOM / 20.80 20.00 PL_\$CLB 1.00	RCR-58-V 5351 JNF	1 X 20' R/L HEAT: (139624)	•	FRAIS_ENERGETIQUE
	IZ.										
	Internal Use Only										

NIR: R-109516-6



# ACIER OUELLETTE INC.

Order - Sales

CO00061364

indicor.		Product Description			HAWKESBURY, Ontario, K6A 1K7	1270 , ABERDEEN ST.	DART AEROSPACE LTD	Rilled to			
Total Weight (LBS): 1 157.05		Weight Oty	Delivery Route 5	Att : CHANTAL LAVOIE Tél.: 613-632-5200		. Ontario	Snipped to	O. C.		Fax: 450-377-5696 Mtl: 514-336-4246 Ext.: 866-456-4242	935, boul. du Havre Salaberry de Valleyfield (Québec) J6S 5L1 Tél· 450-377-4248 MH· 514-336-4348 Evr. 900-667-4349
-		C/M		5200						: 866-456-4242	. 800 667 4748
VIR : R-	CMD		Page	Cre	Car	Sal	Pro	' You	Del	Date	<u>ل</u> ا
NIR : R-109516-6	EXP	PCS NB	e	<b>Credit Terme</b>	Carrier	Salesman	Processed by	Your order No	Delivery date	ë	Customer N°
	B/0	NB		ne			у	N <sub>o</sub>	ate		No.
	IN		2	Net 30 Days	OUELL		Josianne Bourdon	38311	2017/11/13	2017/11/10	CLI0001056
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-	S	าล บร			ALLE:		rdon				
+	C	Internal Use Only			OUELLETTE VALLEYFIELD				00:00		
	OUT	٧									
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Conditions:

All soid and delivered materials remain the property of "Acier Ouellette Inc" until payment is made in full, complete and cashed, All lost materials are at the buyer's expense. The warranty offered by "Acier Ouellette Inc." is the same as offered and honored by the manufacturer and his warranty is transferred by "Acier Ouellette Inc." to the clent. The buyer nereby accepts to respect the following conditions: Net 30 days from billing date and the buyer accepts to pay administration charges of 2% per month (24% per annum) on all past due amounts over 30 days. Any default in respect with this contract will lead to payment by acceleration and permits to the seller, at his choice to claim for the balance due or the repossession of the goods sold. All claims must be made within five (5) days with this document enclosed. Any merchandise that has been damaged, cut or modified cannot be returned. All goods returned must be with our authorization and are subject to a 25% restocking charge.

Prepared By :

Verified By:

Delivered By:

Time

Customer's Signature

3 -0

Total (\$CAD) Deposit Balance

163.57

163.57 0.00



# ACIER OUELLETTE INC.

# Order - Sales

Copy

CO00061371

4 BOLIND ALAD HEAT TREAT 3/4 DAILSON		Product Description				HAWKESBURY, Ontario, K6A 1K7	1270 , ABERDEEN ST.	ROSPACE LTD	Billed to			001-111-111-	
	13	Weight Oty U/M		Delivery Route 5	Att : CHANTAL LAVOIE Tel.: 613-632-5200	, Country,	Optacio	ampheu to	nkingod to		Fax: 450-377-5696 Mtl: 514-336-4246 Ext.: 866-456-4242	Salaberry de Valleyfield (Québec) J6S 5L1 Tél : 450-377-4248 MH: 514-336-4348 Ext : 800-667 4348	935, Boul. du Havre
	CMD EXP B/O	PCS NB	raye	Paga	<b>Credit Terme</b>	Carrier	Salesman	Processed by	Your order N°	Delivery date	Date	Customer N°	
	IN I S C OUT	Internal Use Only	_	•	Net 30 Days	OUELLETTE VALLEYFIELD		Josianne Bourdon	38311	2017/11/13	2017/11/10	CLI0001056	- " "

				Pag	e		_			
Product Description	Weight	9	II/M		PCS NB	B		Internal Use Only	Jse O	nly
	319	4.4	0/11	CMD	EXP	В/О	IN	S	0	TUO
1 ROUND 4140 HEAT TREAT 3/4 RANDOM R4140-34H-V 4949	15.02	10.00	PI_\$CLB	1.00						
1 X 10' HEAT: M52573)										
COUPE A LA SCHE  SCIE  1		1.00	UN.							
2 ROUND 4140 HEAT TREAT 1 1/2 RANDOM R4140-112H-V 4893 1 X 9'7" DC HEAT: (4162392)	57.56	9.58	PI_\$CLB	1.00						
3 ROUND 4140 HEAT TREAT 1 3/4 RANDOM R4140-134H-V 4911 1 X 5' DC HEAT: 166509	40.89	5.00	PI_\$CLB	1.00						
Conditions:	Total Weight (LBS) : 113.47	) il 113.47		NIR : R-109516-6	09516-6				+	

Conditions:

All sold and delivered materials remain the property of "Acer Quellette Inc" until payment is made in full, complete and cashed. All lost materials are at the buyer's expense. The warrarry offered by "Acer Quellette Inc." is the same as offered and honored by the manufacturer and his warranty is transferred by "Acer Quellette Inc." to the client. The Buyer nerby screpts to respect the following conditions: Ite: 20 days from billing date and the buyer accepts to pay administration charges of 2) are month (24% per animal) on all past due amounts over 20 days. Any default in respect with this contract will lead to payment by acceleration and permits to the seller, at his choice to daim for the balance due or the repossession of the goods soid. All claims must be made within five (5) days with this document encosed. Any merchandise that has been damaged, cut or modified cannot be returned. All goods returned must be with our authorization and are subject to a 25% restocking charge.

	-	Prepared By :
		Verified By :
		Delivered By :
		Time
		Customer's Signature
	:	× ×
Balance	Deposit	Total (\$CAD)
241.54	0.00	241.54

DOL   Ship Dais   Chalcomer PO   Item   Chalcomer Item   Man   Datic Pelation   Man   Dat	aton Stee	Eaton Steel Bar Company Inspection	nspection	Certificate	1626286		Contradiction of the Contradic		10101.100	3
Marches   Marc		ВОГ	Ship Date	Customer PO	ltarn	0	austomer Item	Item Description		
Control   Cont		20724		898205	11144 rav		016242	3/4 HR RD 4140/42MM 2010	In SBQ OTSF FG MST	
	M hundles listed beig	ow were produced using steel fro	m Heat W52573 lss	wed by GERDAU-MONR	OE and we	re completed from	Eaton Steel Job 8086:	-		
Cuttien		Description		Value	Units	Heat Treating	Description		Value	Units
	The same	Carbon		0.40000	DMGI	-	Temper Temp 1	n Fahrenheit	500 - 2500	200
Prisaphonus	3	Manganese		0.85000	PWGT	AUSTEN TEMP P	Austenitize T	emp in Fahrenheit	1600 - 1700	2 0
Sultion		Phosphorus		0.01000	PWGT	SR TEMP F	Stress Relief	Temp in Fahrenheit	0 - 20	3 8
		Sultur		0.02400	TOM	TH-METTERNAM	Magnet am An	000000	Report	+
Charles   Char	-	Silicon		0.25000	PMCT	OURNER MEDIA	Quench Media		O/M7d	+
	T .	Nickel		0.96000	PMG!	STRESS PRES	Cert stress f		CERTIFIED	Н
Composition   Country		Con Constant		0.18000	PWCT	IT4140-42QT	Quench & Temp	er	CONFORMS	-
Copper   Copper   Country   Countr	10	Aluminum		0.03000	PHGT	Mill Processing	Description		Value	Units
Control   Cont		Copper		0.17000	PHCT	MELT COUNTRY	Melted in Cou	ntry	USA	+
Columbium   Colu		Vanadium		0.00200	PHCT	BOLLED COUNTR	L	week	USA	+
Sitrogen   Sultant   Sul	8	Columbium		0.00200	PWGT	RED RATIO	Reduction Rat	10	Value Value	,
		Nitrogen		0.00000	PMGI	ASIM Slandard	Description		COMPORMS	-
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Discription	leanliness	Description	March Street Street	Value	Oilles	DESCRIPTION OF	Percent Tempe	red Martensite		PCT
Name   Disameter	WOW FICH	Nepote macro ecen reserve		Value	Units	MICROSTRUCTUR		ostructure	72	-
Description	LAGTER	Diameter	The second secon	0.7420 - 0.7580	-4	Tag Number		Oty Units	Length	
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1/16 inch from Quenched End   56   HRC		1/16 Inch Econ Quenched		56	- FRO					
4/16 inch from Quenched End   56		1/16 inch from Quenched B	nd	9.6	HAC	ASTM A	304			
S/16 inch from Quenched End   S6   HRC	•	4/16 inch from Quenched t	and	56	HRC				5	
8/16 inch from Quenched End   54   HRC	5	5/16 inch from Quenched E	\$nd	56	HRC			シーフミ		
7/16 inch from Quenched End   54   HRC     8/16 inch from Quenched End   52   HRC     10/16 inch from Quenched End   52   HRC     11/16 inch from Quenched End   50   HRC     11/16 inch from Quenched End   50   HRC     11/16 inch from Quenched End   48   HRC     12/16 inch from Quenched End   48   HRC     12/16 inch from Quenched End   44   HRC     18/16 inch from Quenched End   41   HRC     18/16 inch from Quenched End   42   HRC     18/16 inch from Quenched End   43   HRC     18/16 inch from Quenched End   40   HRC     18/16 inch from Quenched End   40   HRC     18/16 inch from Quenched End   36   HRC     18/16 inch from Quenched End   40   HRC     18/16 inch from Quench	50	inch	End	56	HAC			2		
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12/16   Inch from Quenched End   48     14/16   Inch from Quenched End   46     16/16   Inch from Quenched End   44     16/16   Inch from Quenched End   44     16/16   Inch from Quenched End   42     16/16   Inch from Quenched End   42     16/16   Inch from Quenched End   42     16/16   Inch from Quenched End   40     16/16   Inch from Quenched End   36     16/1	10	10/16 inch irom Quenched	200		HRC					
14/16 inch from Quenched End	13	12/16 Inch from Quenched	End	4	HRC					
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18/16 inch from Quenched End   43   20/16 inch from Quenched End   42   22/16 inch from Quenched End   42   22/16 inch from Quenched End   40   24/16 inch from Quenched End   38   24/16 inch from Quenched End   38   24/16 inch from Quenched End   36   22/16 inch from Quenched End   38   22/16 inch from Quenched End	116	116/16 inch from Quenched	End	44	HRC					
20/16 inch from Quenched End   42	110	18/16 inch from Quenched	End	t	HORC					
22/16 inch from Quenched End 40  28/16 inch from Quenched End 38  28/16 inch from Quenched End 36  32/16 inch from Quenched End Value  15/16 inch from Quenched End 36  32/16 inch from Quenched End 36  34/16 inch from Quenched End 36  36/16 inch from Quenched End 36  38/16 inch from Quenched End 38  38/16 inch from Quenched End 36  38/16 inch from Quenched End 3	120	20/16 inch from Quenched	End	42	1080					
24/16 inch from Quenched End 38 26/16 inch from Quenched End 38 32/16 inch from Quenched End 36 32/16 inch from Quenched End 36 Description Description SILE PSY Tensile Strength in PSI Units LD PSY Yield Strength in PSI Units MEATION Percent Elongation in Area	122	22/16 inch from Quenched	End		HORO.					
28/16 Inch From Quenched End 36 32/16 inch from Quenched End 36 Description SILE PSY Tensile Strength in PSI Units LD PSY Yield Strength in PSI Units MEATION Percent Elongation UCTION Percent Reduction in Area	124	24/16 inch from Guenched	End	40	5 2	-				
Description  Description  ED PSI Tensile Strength in PSI Units  ED PSI Yield Strength in PSI Units  NEATION Percent Elongation  UCTION Percent Reduction in Area	J28	28/16 inch from Quenched	End	J.	200	_1_				
Description  Tensile Strength in PSI Units  Yield Strength in PSI Units  Percent Elongation in Area	132	32/16 inch from Quenched	End	36	HAC					
Yield Strength in PSI Units Percent Elongation Percent Reduction in Area	dechanical	Description	Maria de la companya	valley	PSI	_=				
Percent Elongation Percent Reduction in Area	YIELD PSI	Yield Strength in PSI Un	109		154	l				
Percent Reduction in Area	KLONGATION	Percent Elongation			3	•				
	REDUCTION	Reduction in	Δ	-	2					

Bundle lags with Eaton Steel identifiers relevance the steel grade, heat, purchase order number, part number, product doscription and weight. Tested and certified in accordance with Eaton Steel Quality Manual QM-00001 / Rev 3 / 2/29/13.

We hereby certify the above to be in conformance, and a true copy of data represented in company records. This steet was not subject to weld repair or exposed to mercury while in the possession of Eaton Steet.

Thomas Snabes Corporate Metallurgist

http://www.eatonsteef.com 10221 Capital Avenue, Oak Park, MI 48237 USA

Fax: 248-396-1434 Tel: 248-388-3434

GERDAU SPECIAL STEEL HORTH AVERICA 5551 HORRILL HOAD JACKSON, MICHIGAN 49301

142324	1012462/4140EFVD	
DAN MCNAUGHTON EATON STEEL CORPORATION 10221 CAPITAL	RPORATION EATON STEEL CORPORATION VULCAN HEAT TREATING 10 CROSSCREEK TRAIL	ž
OAK PARK , MI 48237	48237 PELHAM , AL 35124	
eme.	ORDERE	
1TEM 1012462 REV 1	0 (3/4") RND 1 20 CHICAGO STATE OF THE COLUMN	
	CHEMICAL ANALYSIS	
C	P S Si Ni Cr Mo Cu	Sn Al
0 0.85	0.010 0.024 0.25 0.12 0.96 0.18 0.17	0.008 0.030
v No		
0.002 0.002		
GRAIN SIZE	SPECIFICATION ASTW E112 FINE GRAIN 5-8	
HARDENABILITY	SPECIFICATION ASTM A255/A304	
THEORETICAL J1 2 3 4 5 56 56 56 56 56	5 6 7 8 9 10 11 12 13 14 15 16 18 20 22 24 26 6 56 54 53 52 50 48 46 44 43 42 40	26 30 32 34 38 36
DI CALCULATION	SPECIFICATION CAT 1E0024	
5.07	7	
REDUCTION RATIO	SPECIFICATION ITEM 1012462	
RATIO= 81.5 TO	0 1.0	
PAGE 1	that these data are correct and in compliance with specified requirements.	requirements.
Gerdau Monros	windy I have	Wendy J. Cralg
- The state of the	771997	-

GERDAU SPECIAL STEEL NORTH AMERICA 5591 HORRILL ROAD JACKSON, HICHIGAN 49201

142324 ASTM E381 MACRO ETCH SATISFACTORY: \$1/R1/C1; MEETS SAE J422
\$5/05 RATING (WORST FIELD);

\*\*\* MATERIAL 100\*\* MELTED AND MANUFACTURED IN THE U.S.A. BY THE ELECTRIC ARC FURNACE AND CONTINUOUS CASTING METHOD. THE PRODUCT HAS NOT BEEN EXPOSED BEEN REPAIRED BY WELDING AND THIS MATERIAL HAS NOT BEEN EXPOSED TO MERCURY OR TO ANY OTHER METAL ALLOY THAT IS LIQUID AT AMBIENT TO MERCURY OR TO ANY OTHER METAL ALLOY THAT IS LIQUID. TEMPERATURES DURING PROCESSING OR WHILE IN OUR POSSESSION.

TEMPERATURES DURING PROCESSING OR WHILE IN OUR POSSESSION.

TEMPERATURES DURING PROCESSING OR WHILE IN OUR POSSESSION.

TEMPERATURES SHIPPED ARE FREE OF RADIOACTIVE MATERIAL. RESIDUAL MAX RESIDUAL MIN ITEM 1012462 REV 1 DTD 03/05/12; A29/A29M-12; A322-07 3000 Zast Front Street Gerdau Monroe P+S = 0.0340 P+S = 0.0340 4140 DAN MCNAUGHTON EATON STEEL CORPORATION OAK PARK , MI 48237 10221 CAPITAL We certify that these data are correct and in compliance with specified requirements. 1012462/4140EFVD SPECIFICATION ITEM 1012462 SPECIFICATION ITEM 1012462 CERTIFIED MATERIAL TEST REPORT 3/4" ORDERED R EATON STEEL CORPORATION & VULCAN HEAT TREATING 10 CROSSCREEK TRAIL PELHAM , AL 35124 M52573 283416 101
Danieli Cast wind 9H19 TO 20 -C 40.4 11/05/13 Wendy J. Craig

haptenentative

Monroe, MI 48161

UNITED TO CORRECTE TRAIN CONTROL CONTR	Peur Chune 127/13 9:44 AM wat: datin Pege 1 of 2	Induction Heal Treased Average Clause Reading: 415 Average Clause Reading: 415 The information consisted of 190% tempered market like from the surface to the center. The information tempered in 1906 degrees if. Test openment meet the ASTIM ASTO-12a expeditionana.
USER PRODUCTS, MC. Fox (200) 620-9190  INSEADED PRODUCTS, MC. Fox (200) 620-9190  INSEADED PRODUCTS, MC. Fox (200) 620-9190  Job Not 344313  Containers: \$7521276 \$7525266  Customer Part Not: 1012453-001  Ander: VID 753733  Ander: VID 753733  Ander: VID 753733  Applicable Specification  Fart Not Real 140 750240 QAT ES  Part Not Real 140 750240 QAT ES  Anterior Specification  Test Results  Note: 1012462 Product Specification Part Note: 1012462 Product Part Note: 1012	a Irc. Quality Assurance rivey and in the production of a ed on the material his Mercury used in the production of a	Haransi was manufactured, testad and inappated in accordance with Vulgar Thresced Product 82/2411. Processed materials Quenched and Tempored - Stress Free. No weld repair perform material. Material and Manufactured in the USA.
Vucan Treased Products 10 Cract Creek Trei 11 Crack Pann, AL 35178 11 Tel (200) 620-6180 11 Tel (200) 620-6180 11 Tel (200) 620-6180 12 Containers: \$7521278 \$7525296 12 Containers: \$7521278 \$7525296 13 Containers: \$7521278 \$7525296 14 Customer Part No: 1012483-001 14 Customer Part No: 1012483-001 15 Customer Part No: 1012483-001 15 Customer Part No: 1012483-001 16 Customer Part No: 1012483-001 16 Customer Part No: 1012483-001 17 Customer Part No: 1012483-001 17 Customer Part No: 1012483-001 18 Part Information 18 Part Information 18 Part Information 19 Part No: 1488 4140 750240 QAT ES 19 Part Information 19 Part No: 1488 4140 750240 QAT ES 19 Part Information 19 Part No: 1488 4140 750240 QAT ES 19 Part Information 19 Part No: 1488 4140 750240 QAT ES 2012a	Good Str. N. Et. B. 1800 3	Harding Comment C   Mark of the season of th
Vocan Threaded Products 10 Cores Creek Trial Palam, AL 25124 19 Information Fac (200) 620-5100 Fac (200) 620	Damin Beaten Cauber Ville We in in	See following pages for tests  Certified Chamical Analysis
Vocan Threaded Products 10 Cross Creek Trail 10 Cro		
Value Threaded Products         JOB MATERIAL CERTIFICAT           10 Cross Creek Test         JOB MATERIAL CERTIFICAT           Pathorn, A. 1819.         2000 MATERIAL CERTIFICAT           Pathorn, A. 1819.         2000 Trolley in Earl (200) 620-6189           S7521276 S7525266         2000 Trolley in Early Shipped City: 10442 Bts           S7521276 S7525266         Shipped City: 10442 Bts           1012453-001         Alloy Type: 4100           NAB 4140 7503240 QAT ES         Alloy Temper: 4140           Applicable Specifications         Alloy Temper: 4140		PPO ASTM A193 B7/ASME SA193 B7 Customer Specification
Vulcan Threaded Products 10 Cross Creek Tred 1	•	
Vucan Threaded Products 10 Cross Creek Treil 10 Cre	Alloy - Temper: 4140	Part Group: HT TOLL
Vucan Threaded Products 10 Cross Creek Tred 10 Cross Creek 10 Cross Cre	Name: Hot Kon bers	Part No: HRB 4140 .750x240 Q&T ES
Vucan Threaded Products 10 Cross Creek Tred 10 Cross Cross Cross Creek Tred 10 Cross C		
Vulcan Threaded Products 10 Cross Creek Tred 10 Cr		Order No: 201403
Vulcan Threaded Products 10 Cross Creek Trail 10 Cross Creek Trail 10 Cross Creek Trail 10 Cross Creek Trail 1174 124 (205) 820-5100 124 (205) 820-5100 124 (205) 820-5100 124 (205) 820-5100 124 (205) 820-5100 125 (205) 820-5100 126 (205) 820	Shipped Dty: 16442 lbs	Customer Part No: 1012453-001 Customer PO No: 143438-753733
Vulcan Threaded Products 10 Cross Creek Treil Petham, AL 31194 Fax (205) 820-5100 Fax (205) 820-5150 Job Informa S7521276 S7525296	Ship To: Drive Taylor, MI 48180	Gustomer: Eaton Steel Corporation
Vuttan Trinaded Products 10 Cross Creek Trail pathan, AL 35124 Tel (205) 620-5100 Faz (205) 620-5150 Job Informa	20601 Trailey industrial	
Vulcan Threaded Products 10 Cross Creek Trail patham, AL 35124 Tel (705) 620-5100 Fax (705) 620-5150	Certified Date: 12/7/13	LILLAN
	ATERIAL CERTIFICATION	Vuttan Threaded Products 10 Cross Creek Trail patham, AL 35134 Tel (205) 623-5100 Faz (205) 623-5150

ourt 377069

Date	Chmisianski, David - Supervisor	Christia		
נאתנו	of Minhal	Diane !		
i g	n) Quanch Water Temp (F)	(Lbs) (Lbs) Run Speed (Filmin) 1316 4350	Teel No. 25757 Test Quanch & Temper Information (Lbs) Description Current & Temper Information Results	Duenth & T
ğ	Surface Center Handshee (HEC) Hardshee (HEC) (HEC)	Enopation Gape   POA   Midmelia (MRC)   Horizon (MRC)   Horizo	Teat No. 25756 Teet Quench & Temper Physicala (Lts) Tensile Their Arm Libragistes Description [gal] Other (bel) (%) Openin & Temper [gal] (7)	Dest No. 25758 T Dest Alpton Quench & Temps Physicals Results
		Test Results		
			Containers: \$7521276 \$7525296	8
	Certified Date: 12//13	Job Information	Job No: 344313	
NOIT	JOB MATERIAL CERTIFICATION		Vucan Treaded Products 10 Cross Cresk Tred 10 Cross Cresk Tred Pohlem, AL 33144 Tel (205) 820-5100 34CTS, IVC. Fee (205) 820-5150	NAME OF THE PARTY



### CERTIFICATION

CERTIFICATE Rev H174279 3 10/14/16 PAGE

PURCHASE ORDER B96752

ORDER 915827-1

CUSTOMERITEM V012142

GRADE QT4140

SHAPE Round

SIZE 1.5000

SIZE MM 38.1000 MM

ITEM 141500240Q04A

LENGTH 20' 0"/24' 0"

LENGTH MM 6096 / 7315.2

4140/42 CA/AL-TRT QT-HR-STRESS FREE 130K TS-110K-YS-L02% 100K) 16% EL 50% R/A SURFACE HBN 269/321 Spec/Rev: ASTM A193/A193M-14 GR-B7 Spec/Rev: ASTM A29/A29M-15 Spec/Rev: ASTM A434-06(2012) CL-BC Spec/Rev: ASTM A29/A29M-15 Spec/Rev: ASTM

	HEAT	7	GR	AIN PRA	CTICE		SOUR	CE / MELTE	D			CAST	REDU	CTION RATIO	0	DI
( )	41623	92		FINE(5	-8)	S	TEEL D	YNAMICS	(USA	)		BLOOM		79.2:1		5.86
CHEMIST	IRY数	Vail its	1944	場合の	MESSAGE PAR	水色层	<b>美见</b>	A STATE AND A STAT	200	SUN BE	- 4× 4-19	PASSAGE	ere in the	SHARING IS	C 100	the state of
С		MN		Р	S		SI	N		C		MO	CU	A	L	V
0.42	0	0.90	00	.013	.01	5	0.240	0.1	20	0.980	,	.200	.250	.0	30	.003
	N		TE		AS	T	P	В		SE		BI	-	В	T	NB
.0	800		N/A	4	N/A		N	/A		N/A		N/A		.0005	+-	N/A
MECHAN	ICAL	12.0	103.65.3	9.46	A DOMESTIC	230000	C Belo	Y. Electric	(11×1)		ENGENTIE.	ands res	ang salama	21 (1742)	1786-053	
	JOB			NSILE		% YIELD		ELONG	7	ROFA		HARDNES		W YIELD		RTEMP
HS4	43559		149,4	434 PS	1 133,	398 PSI		17.40		53.10	H	IBN = 30	2 1	28,646		
QUENCH	& TER	IPER //	The Co	Ser.	<b>建筑起外部</b>	A start	14. C	在的用数	MIN I		775 K. 1978	がはない	機能等數的	学生基础的	March 18	2004年2月
JOB			MACRO		SURFACE			USTENITIZE				TEMPER		I	STRESS	
					33.1.7.02	TEMPE	RATURE	TIME	QI	JENCH	TEMPER	ATURE	TIME	TEMPERA	TURE	TIME
HS435	59	SATI	SFACTO	DRY	HBN = 311	1650F		6.0 MIN	WAT	TER	1100F		4.5 HRS	STRES	SFREE	
ARDEN	ABILIT	Y	的基础的	ं तस्त्र द	此合物性的是	24.880	<b>美国</b> 相关	7.7	21:20		A TELEVISION	Digg.	K WARK	Professional Control	No House	The lates
01		02	03	04	05	06	08			12	14	16	20	24	28	32
57	5	57	57	57	57	57	57	7 54		51	50	48	47	46	44	41
01	间的增	3-4-21	<b>经国际</b>	14.41 <sub>4</sub>	が大きなない。	CO CO	はなる	A COMPANY	No. 18	(分)独约	的域的影	Not some	THE STANK	S 200 (42)	MARKETS.	274000公司等
LO	T		JOB		WEIGHT (		PIECES			LC			ОВ	WEIGHT (		PIECES
52398			HS43559	1	5,100		38		Γ	52403	85	HS43	559	4.700	V-10000000	35
52404	28		HS43559	1	3,772		28			52404	80	HS43!	559	4,070		30



WE, hereby certify that these goods were produced in compliance with all applicable requirements of sections 6, 7, and 12 of the Fair Labor Standards Act, as ameneded, and all regulations and orders of the United States Department of Labor issued under section 14 thereof. Material was not exposed to increary or any metal alloy that is liquid at ambient temerature during processing or while in our possession. No weld repairs performed on the above inaterial

Collaborate	Eaton Ste	Eaton Steel Bar Company Inspection Certificate 1601418	y Inspection	Certificate	1601	418			EN 10204:2004-3.1
	Customer			Customer PO	Item	Cu	stomer Item	Item Description	
Lincides istord below were produced using steel from feet 166609   AutoN STEEL and were completed from Esten Steel 405 799493.   Cartifolion   CA1000   CA10000   CA10000   CA10000   CA10000   CA10000   CA1000		2		B96887	11132 гву		16262		I SBQ QTSF FG MST
	All bundles listed	below were produced using stee	ol from Heat 166509 Issu	ed by ALTON STEEL a	nd were co	ompleted from Eaton	Steel Job 799489.		
	Chemistry	Description		Value	Units		腫		Value
Distriction	22	Manganese		0.41000	TOWA	A dwar Nadwar	Temper Temp in	Fahrenheit	500 - 2500
	9	Phosphorus		0.01400	TDWGT	SR TEMP P	Stress Relief	emp in Fahrenheit	500 - 2500
	\$ .	Sulfur		0.02200	PWGT	WAGNETISM-HT	Magnetism in G	1499	0 - 20
	15	Stitcon		0.23000	PWGT	TIME AT TEMP	Time at Tempera	cure	Report
	111	Mickel		0.10900	PWGT	QUENCH MEDIA	Quench Media Ru	quirements	P£W/O
Alice form   Ali	No.	Molybdenum		0.000	TOWN	STATE SEXE	Cerc stress tr	8	CERTIFIED
Copper	A1	Aluminum		0.00100	PWGI	Mill Processing	Description		Value
Columbium	5	Copper		0.23000	PWGT	MEGT COUNTRY	Melted in Count	. YY	ASU
	4	Vanadium		0.02800	IDMG	ROLLED COUNTRY	Rolled in Count	ry	USA
Statement Stam Limit	8	Columbium		0.00200	TDWGT	RED RATIO	Reduction Ratio		20.37
Ideal Discription	D+S	Element Sum Limit		0.02.0	TOWN	Original Surgar	Description		Value
	DI	. Ideal Diameter		4.97000	N.	7434-90a-BC	ASTMA BC Tensil	-	Consolation
Report matro etch results.   FERCENT 7X   Percent Tropored Materials	Cleanliness	Description	The Control of the last	Value	Units	Structure	Description	-	Value
Description	MACRO ETCH	Report macro etch resu	its.			PERCENT TH	Percent Tempere	d Marcensice	001 - 08
Description   Principle   Pr	Geometry	Description		Value	_	MICROSTRUCTURE	Reported Micros	tructure	3
1/16 Inch from Quenched End   56   IRC	Jominy	Description		Value		022-1875938		4155 LBS	Length
2/16 inch from Quenched End   56	31 .	1/16 inch from Quenche	d End	56	HRC				
1/16 inch from Quenched End   56	10	2/16 inch from Quenche	d End	56	HRC				
1/16   Inch   From Quenched   End   56   HRC	33	3/16 inch from Quenche	d End	56	HRC				
	C4.	4/16 inch from Quenche	d End	56	няс			>	-
1/16 inch from Quenched End	16	6/16 inch from Ommoche	d end	20	DAK.				)
8/16   Irch   From   Quenched   End   52   HRC	37	7/16 inch from Quenche	d End	54	HRC			75	
9/15 inch from Quenched End 51 HRC 10/36 Inch from Quenched End 0.06000 HRC 11/16 Inch from Quenched End 47 HRC 12/16 Inch from Quenched End 47 HRC 14/16 Inch from Quenched End 45 HRC 16/16 Inch from Quenched End 45 HRC 18/16 Inch from Quenched End 42 HRC 20/16 Inch from Quenched End 41 HRC 20/16 Inch from Quenched End 41 HRC 20/16 Inch from Quenched End 41 HRC 22/16 Inch from Quenched End 41 HRC 22/16 Inch from Quenched End 40 HRC 22/16 Inch from Quenched End 40 HRC 22/16 Inch from Quenched End 40 HRC 28/16 Inch from Quenched End 47 HRC 28/16 Inch from Quenched End 97 HRC 28/16 Inch from Quenched E	38	8/16 inch from Quenche	d End	52	няс			(1)	
10/16 inch from Quenched End   50	J9	9/16 inch from Quenche	d End	15	нас				
11/16 inch from Quenched End	310	10/16 inch from Quench	ed End	50	HRC				
12/16 Inch from Quenched End   47	JII	11/16 inch from Quench	ed Epd	0.06000	нас				
14/16 Inch From Quenched End	J12	12/16 inch from Quench	ed End	47	HRC				
18/16 inch from Quenched End   42	014	14/16 inch from Quench	ed End	45	HRC				
20/16 inch from Quenched End   41   22/16 inch from Quenched End   0.07000   24/16 inch from Quenched End   40   40   24/16 inch from Quenched End   37   27/16 inch from Quenched End   35   27/16 inch from Quenched End   37/16 inc	J18	18/16 inch from Quench	ed End	42	HAC				
22/16 inch from Quenched End   0.07000	J20	20/16 inch from Quench	ed End	41	HRC				
24/16 inch from Quenched End   40   28/16 inch from Quenched End   37   32/16 inch from Quenched End   35   40   40   40   40   40   40   40   4	J12	22/16 inch from Quench	ed End	0.07000	HRC				
20/16 inch from Quenched End   37	J24	24/16 inch from Quench	od End	40	HRC				
12/16 inch from Quenched End   Value	J28	28/16 inch from Quench	ed End	17	няс				
Description   Value	J32	32/16 inch from Quench	ed End	35	HRC				
Yield Strongth in PGI Units	Mechanical	Tensile Strangth in BC	TO STATE OF THE PARTY OF THE PA	Value	פוהט				
Percent Blongation 19.00 Percent Reduction in Area 55.0	ISG CIEIA	Yield Strength in PSI	Units	138300	PSI				
Percent Reduction in Area 55.0	ELCHGATION	Percent Elongation		19.00	PCT				
	REDUCTION	on in	rea	55.0	ñ				

Bundle lags with Eaton Stedi identifiers reference the steel grade, heat, purchase order number, product description and weight. Tested and certified in accordance with Eaton Steel's Quality Manual QM-00001 / Rev 3 / 226/13.

Thomas Snabes, Corporate Metallurgist We hereby certify the above to be in conformance, and a true copy of data represented in company records. This steel was not subject to welld repair or exposed to mercury while in the possession of Eaton Steel. data processing and is valid without signature This document was prepared by means of electronic 10221 Capital Avenue, Oak Park, MI 48237 USA http://www.eatonsteel.com Fax: 248-398-1434 Tel: 248-398-3434

Created on 27-Oct-2016



# CERTIFIED MILL TEST REPORT

Arm Steel Fest Lab #5 Out Street Arm, TL 62202-9011 (618) 463-4490 txT 2486 (618) 463-4431 (Fest)

Half-Skippon TA TB TC TD HA HB HC HD S D S R C  LINES HE CONTROL OF THE HE TO THE HA HB HC HD S DOTTONAL COMMENTS  ADDITIONAL COMMENTS
ASTREASHMAN AS HE HS S Q  ADDITIONAL CONNENTS
TB TC TD HA HB HC HO S O
ASTN E-45 McCod C
1
SPECIAL TEST RESULTS
CS 01 11 12 13 H 15 16 17 18 17 497 25 55 56 56 55 56 51
JOHINY HARDENABILITY USING ASTN A-155 CALCULATED FROM CHENICAL DI
0.41 0.89 0.014 0.022 0.23 0.100 0.866 0.162 0.003
S S S S S S S S S S S S S S S S S S S
CHEMICAL AVAINSTS TEST METHODS ASTH E-415 & E-1019
Tam Description Seel Sur, Hot Raind, 1,7500, 24° 2°
Date         C6/10/C955         Commone PO         155912-NS         Specification I           ASI Ord live (time)         1         Commone PT         100c2         Specification I         Specification I           ASI Ord live (time)         1         Commone PT         100c2         Specification I         ASIN A 20x-11, ASIN A 322-07
ON Part, PH 48337 CAN PART, PH 4
SHIP TO

# Lab Services Report



10221 Capital Avenue Oak Park MI 48237 (248)543-3578 telephone (248)388-1434 facsimie

Oak Park, MI 10400 Capital Avenue

Randy Call rcall@spollohtp.com

Attn:

Ship To: Apollo Heat Treating 10400 Capital Avenue

Oak Park, MI

10/14/2016

Report Date: Report ID: Request ID: 16-3002

Work Order 799489

This report contains results for the indicated services performed on the following sample(s):

Part No. | 11132 OTSF | Finish: | HAR

Size | 1-34 | Gradige | 4140

Titan Sample ID | | Heat | 2-34 | Gradige | 5-3mple ID | 16-3002-1 | 166509 | WO 799489 Job 2167

Report Approved By: Steve Avery
Mechanical Testing

Star Avery

ASTM E8M-15a

**ASTM E10-15** 

Mechanical Testing ASTM EBM-15a

ASTM E10-15

Sample D: Ultimate: 0.2% Orner: JEdingstion Requestion of Other Surface (1.0002-1 151,000 138,300 19 55 321

Test Comments

Mechanicals tested at Mid Radius

All testing performed by Titan Metailurgy was done at ambient (reem) temperature. Any services within a section marked with " are not part of Than Metallurgy"s current AZLA accreditation.

Report ID:16-3002 Page 1 of 2



# CERTIFICATION OF HEAT TREATMENT

Date: 10 / 17 / 2016
Certification Number: 16 - 0467
Customers Order Number: 799489
Part Number: 10902 - 11132
Heat Number: 16509
Heat Treat Job Number: 2167

Material: 4140
Quantity: 206 Pcs.
Weight: 41,080 Lbs.
Description: 1.7500" Diameter x 24' 2" Length Per Specification: ESHT HT4140 - 42QT

	Temperature	Time at Heat	Coolant
Normalized	N/A		
Preheat	N/A		
Austenitized/Hardened	1600 °F	45 Minutes	
Spray Quenched	102.8 °F - 104.8 °F	N/A	Water
Temper	1220 °F	1 Hour 15 Minutes	Air Cooled to Ambient
Temper	N/A		

Method of heat treat monitor, set point thermocouple (Type K). Equipment calibrated per AMS2750E. contained in the records of Apollo Heat Treating and Processing, LLC. We hereby certify the above material has been treated in the manner described are correct as

Randy L. Call

Plant Manager
Apollo Heat Troating & Processing, LLC

I GERDAU CT CA-ML-WHITBY GERDAU

LES ACIERS TRANSBEC 1997 LITEE 935 DU HAVRE BLVD

JoS 51.1

Canada

CUSTOMER MATERIAL Nº

CUSTOMER SHIP TO

WHITBY, ON LIN STI

\$149135/000510 SALES ORDER

Camada

CUSTOMER PURCHASE ORDER NUMBER CA47906FSMQ3P

BILL OF LADING

DATE 08/28/2017

CERTIFIED MATERIAL TEST REPORT

H - 22 + - 20 4 8 60 7

1 7

DOCUMENT ID: Page 1/1

SALABERRY-DE-VALLEYFIELD,QC LAVAL,QC H7L 5R2 LESACIERS TRANSBEC 1997 LTEE 4054 BOUL LE CORBUSIER CUSTOMER BILL TO GRADE LENGTH

Angle / 3X3XI/4 WEIGHT 6,3701.B HEAT / BATCH 52079714/02

SPECIFICATION / DATE or REVISION

CSA G40.20-13/G40.21-13 ASTM A709-15, AASHTO M270-12 ASTM A6-14, A36-14, ASMI: SA-36 ASTM AS29-14, AS72-15

0.026 \$20.0 0.20 350 0 85 5 2\*€ 0.014 00±34 00 ≈34

CHEMICAL COMPOSITION

0.80

610°0 5°5

MECHANICAL PROPERTIES Sugg: 30.00 8 000 8 000 777724 355 92115 9000 184 184 SECTION AND ADDRESS OF THE PARTY OF THE PART

COMMENTS : NOTES

ASTM Grades: Ap6, 765, 9-50, AS72-50, A709-36, A709-50 This grade meets the requirements for the following grades:

CSA Grades: 44W; 50W
AASHTO Grades: \$1220-56, M270-50

ASME Grades: SA36

The above figures are certified chemical and physical test records as contained in the permanent records of company. We certify that these data are correct and in compliance with specified requirements. This material, including the billets, was melted and manufactured in Canada. CMTR complies with EN 10203-3-1.

Maskery \* OLVITA DISTU GLOS BHANGAR YAI AMAMUHII

Phora (194) 563-1014 Linui Bhaskar Yalamu chib@genlau com

grand de lange QUALITY ASSURANCE MOR CPLIN OCHWOOT

Parie (986) 068-58H EXT-055 - Enail: Leonardo Nuncsos gerdao com

ACIER OUELLETTE INC. DIV SALABEY

AC8919

Invoice No 90593

Shipper No 84846

Heat Number

161503



# NUEVA INCAL, S. A.

aceros calibrados

Golkolbarra, 24 - Apparlado 13 48300 GERNIKA - BIZKAIA Spain Teléfonos (34) 94 625 1/ 12 - 16 Fax (34) 94 627 46 28 nuevanca @nuevaincal.com www.nuevaincal.com



# CERTIFICADO DE CALIDAD

Destinatario:

Material:

1018 COLD ROLLED

CERTIFICAMOS: Que el material suministrado con cargo a los pedidos de

referencia y amparado por nuestro albaran Nº EX/4.511 y Fra. Nº A/21.801

corresponden a los análisis y fusiones siguientes de acuerdo con la norma EN 10204 / 2.2:

		Compos	ición Química de	e la cola	da				Caract.	mecánica	s laminado
S/.Pedidos Nº	MATERIAL	CALIDAD	COLADA	C. %	Mn.	Si.	S. %	P. %	Re N/mm2	Rm N/mm2	۸ %
MON-54349	1 X I		583061	0,17	0,72	-	0,018	0,019	321.00	496,00	29,00
MON-54349	1-1/4 X 1-1/4		7855	0,17	0,75	0.19	0,009	0.016	448.00	293,00	37,20
MON-54349	1-1/2 X 1/4		47395	0,15	0,76	0,16	0,032	0,014	349,00	499.00	37.00
MON-54349	2 X 1/4		580842	0,16	0,72	0,17	0,023	0,014	330,00	500,00	30.00
MON-54349	4 X 2		162442	0,20	0,70	0,17	0.004	0,017	545,00	573,00	15.00
MON-54349	3-1/2 X 1/2		161629	0,16	0,79	0,18	0,002	0,021	329,21	454.32	24.66
MON-54349	(5 X 3/8)		161503	0,17	0,80	0,16	0,004	0,023	548.00	576,00	13.00
MON-54349	5 X 1		161962	0,16	0,84	0,18	0,006	0,018	548,00	575,00	15,00
MON-54349	5 X 1-1/2		161915	0,17	0,78	0,19	0,004	0,021	544,00	572,00	14,00
MON-54349	4 X 1		580133	0,16	0,73	0,18	0,022	0,015	320,00	490.00	32,00
MON-54349	6 X 3/8		160518	0,16	0,68	0,16	0,007	0,016	552,00	579,00	8.00
MON-54349	6 X 1/2		161361	0,18	0,73	0,23	0,006	0,017	558,00	586,00	13,00
MON-54349	6 X 5/8		152780	0,16	0,85	0,19	0,004	0.011	544,00	570,00	9.00
MON-54349	6XI		161367	0,16	0,82	0,17	0,004	0,017	551,00	578.00	14,00
MON-54349	8 X 1/2		162494	0,16	0,79	0,17	0,009	0,012	567,00	595,00	14.00
MON-54349	8 X 1		161036	0,20	0,74	0,19	0,006	0,016	565.00	593,00	14,00

Gernika, 30 de Noviembre de 2.016

Responsable de Calidad







RCK-58-20



ARANA Y LUPARDO, 2

48490 UGAO-MIRAVALLES/VIZCAYA (SPAIN)

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TRA 1469 535 48493

### CERTIFICADO DE CALIDAD/QUALITY REPORT

De acuerdo a /Made according to:

EN 10204/DIN 50049

Nº CERTIFICADO / CERTIFICATE NR.: 47704

ALBARAN Delivery Note Nr. 47704

CLIENTE

LES ACIERS TRANSBEC (1997) LTÉE

CUSTOMER

Norma: EN 10277

Productos Calibrados de acero. Condiciones técnicas de suministro.

Norm:

Bright steel products. Technical delivery conditions,

PRODUCTO SOLICITADO / PRODUCT ACCORDING ASTM A 108

N. PEDIDO Purchase Order	DESCRIPCIÓN Description	KGS.	TOLERANCE	OL	MICOUA Neususement
PAR-47152	12J.14 HEX. ESTIRADO 31,75 (1 1/4")	996	- 0,076	915907	31,75
PAR-47472	12L14 RED. ESTIRADO 50,80 (2")	1.034	- 0,076	916489	50,80
PAR-47851	12L14 RED. ESTIRADO 50,80 (2")	1.090	- 0,076	916489	50,80
PAR-47851	1018 RED. ESTIRADO 31,75 (1 1/4")	994	- 0,051	139211	31,75
MJP-47856	12L14 RED. ESTIRADO 25,40 (1")	3.000	- 0,051	139256	25,40
PAR-47786	1018 RED. ESTIRADO 30,16 (1 3/16")	1.090	0,051	13929?	30,16
PAR-47786	12L14 RED. ESTIRADO 19,05 (3/4")	2.002	- 0,051	202433	19,05
MJP-47861	12L14 HEX. ESTIRADO 31,75 (1 1/4")	994	- 0,076	915907	31,75
OU-47812	1018 RED. ESTIRADO 9,53 (3/8")	1.040	- 0,051	139333	9,53
SM-47572	1018 RED. ESTIRADO 9,53 (3/8")	1.040	- 0,051	139477	9,53
SM-47572	1018 RED. ESTIRADO 31,75 (1 1/4")	1.988	- 0,051	139481	31.75
AQM-47672	1018 RED. ESTIRADO 31,75 (1 1/4")	1.990	- 0,051	13954?	31,75
OU-47832	12L14 RED. ESTTRADO 19,05 (3/4")	1.998	- 0,051	202313	19,05
OU-47832	1018 RED. ESTIRADO 15,88 (5/8")	2.004	- 0,051	139624	15,88
QU_47822-	1018 RED. ESTIRADO 31,75 (1 1/4")	996	- 0,051	139627	31,75
MJP-47896	1018 RED. ESTTRADO 15,88 (5/8")	1.010	- 0,051	139776	15,88

Composición química de la colada / Chemical Analysis of Heat

100000000000000000000000000000000000000	DIDA rement	OF	COLADA Cast Nr.	% C	% Cr	% Cu	% Mn	% Mo	% Ni	% P	% Pb	% S	% Si
31,75	0,00	915907	39680 W	0,070	0,090	0,230	1,110	0,030	0,110	0,051	0,210	0,329	0,020
50,80	0,00	916489	41232 IS	0,060	0,000	0,000	1,120	0,000	0,000	Ω,043	0,220	0,318	0,010
50,80	0,00	916489	41232 IS	0,060	0,000	0,000	1,120	0,000	0,000	0.043	0,220	0,318	0,010
31,75	0,00	139211	41410 AG	0,165	0,000	0,000	0,758	0,000	0,000	0,016	0,000	0,021	0,220
25,40	0,00	139256	41300 AG	0,060	0,086	0,014	1,130	0,006	0,023	0,063	0,300	0,310	0,003
30,16	0,00	139297	41411 AG	0,165	0,000	0,000	0,758	0,000	0,000	0.016	0,000	0,021	0,220
19,05	0,00	202433	41406 AA	0,071	0,046	0,019	1,085	0,004	0,029	0,060	0,295	0,292	0,008
31,75	0,00	915907	39680 W	0,070	0,090	0,230	1,110	0,030	0,110	0,051	0,210	0,329	0,020
9,53	0,00	139333	41460 GM	0,160	0,000	0,000	0,750	0,000	0,000	0,021	0,000	0,032	0.160
9,53	0,00	139477	41460 GM	0,160	0,000	0,000	0,750	0,000	0,000	0,021	0,000	0,032	0,160
31,75	0,00	139481	41410 AG	0,165	0,000	0,000	0,758	0,000	0,000	0,016	0,000	0,021	0,220
31,75	0,00	139547	41410 AG	0,165	0,000	0,000	0,758	0,000	0,000	0,016	0,000	0,021	0,220
19,05	0,00	202313	41406 AA	0,071	0,046	0,019	1,085	0,004	0,029	0,060	0,295	0,292	0.008
15,88	0,00	/139624	41508 G	0,160	0,000	0,000	0,650	0,000	0,000	0,021	0,000	0,023	0,142
31,75	0,00	139627	41410 AG	0,165	0,000	0,000	0,758	0,000	0,000	0,016	0,000	0,021	0,220
15,88	0,00	139776	41508 G	0,160	0,000	0,000	0,650	0,000	0,000	0,021	0,000	0,023	0,142

Caracteristicas mecánicas / Mechanical properties

on Applila



ARANA Y LUPARDO, 2

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# CERTIFICADO DE CALIDAD/QUALITY REPORT

De acuerdo a /Made according to:

EN 10204/DIN 50049

3 1

Nº CERTIFICADO / CERTIFICATE NR.: 47704

ALBARAN 47704
Delivery Note Nr.

CLIENTE

LES ACIERS TRANSBEC (1997) LTÉE

CUSTOMER

Norma : EN 10277

Productos Calibrados de acero. Condiciones técnicas de suministro.

Norm:

Bright steel products. Technical delivery conditions.

MEDIDA Measurement	OF	COLADA Cast Nr.	Resistencia Tens. strenght N/mm2	Lim.elástico Yield point 0,2% N/mm2	Alargamiento Elongation Lo=50 mm.	Dureza HB Hardness HB	Estricción %
31,75	915907	39680 W	533,38	523,05	12,04	169,00	45,79
50,80	916489	41232 IS	515,66	509,28	16,20	178,00	53,91
50,80	916489	41232 IS	515,66	509,28	16,20	178,00	53,91
31,75	139211	41410 AG	558,02	536,07	36,40	159,00	57,29
25,40	139256	41300 AG	556,11	543,10	19,46	159,00	46,32
30,16	139297	41411 AG	551,06	525,36	37,06	165,00	59,43
19,05	202433	41406 AA	584,38	568,82	16,86	172,00	47,83
31,75	915907	39680 W	533,38	523,05	12,04	169,00	45,79
9,53	139333	41460 GM	735,60	691,90	12,70	216,00	59,96
9,53	139477	41460 GM	735,60	691,90	12,70	216,00	59,96
31,75	139481	41410 AG	558,02	536,07	36,40	159,00	57,29
31,75	139547	41410 AG	558,02	536,07	36,40	159,00	57,29
19,05	202313	41406 A.A	584,38	568,82	16,86	172,00	47,83
15,88	139624	41508 G	602,29	574,24	20,18	176,00	60,19
31,75	139627	41410 AG	558,02	536,07	36,40	159,00	57,79
15,88	139776	41508 G	602,29	574,24	20,18	176,00	60,19

### Calidad Superficial

DESCRIPCIÓN Description	OF	Clase EN 10277-1
12L14 HEX. ESTIRADO 31,75 (1 1/4")	915907	1
12I.14 RED. ESTTRADO 50,80 (2")	916489	2
121.14 RED. ESTIRADO 50,80 (2")	916489	2
1018 RED. ESTIRADO 31,75 (1 1/4")	139211	3
12L14 RED. ESTIRADO 25,40 (1")	139256	3
1018 RED. ESTIRADO 30,16 (1 3/16")	139297	2
12L14 RED. ESTIRADO 19,05 (3/4")	202433	3
12L14 HEX. ESTIRADO 31,75 (1 1/4")	915907	1
1018 RED. ESTIRADO 9,53 (3/8")	139333	2
1018 RED. ESTTRADO 9,53 (3/8")	139477	2
1018 RED. ESTTRADO 31,75 (1 1/4")	139481	3
1018 RED. ESTIRADO 31,75 (1 1/4")	139547	3
12L14 RED. ESTIRADO 19,05 (3/4")	202313	3
1018 RED. ESTIRADO 15,88 (5/8")	139624	2
1018 RED. ESTIRADO 31,75 (1 1/4")	139627	3
1018 RED. ESTIRADO 15,88 (5/8")	139776	2



ARANA Y LUPARDO, 2 48490 UGAO-MIRAVALLES/VIZCAYA (SPAIN)

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# CERTIFICADO DE CALIDAD/QUALITY REPORT

De acuerdo a /Made according to:

EN 10204/DIN 50049

Nº CERTIFICADO / CERTIFICATE NR.: 47704

ALBARAN Delivery Note Nr. 47704

CLIENTE

LES ACIERS TRANSBEC (1997) LTÉE

CUSTOMER

Norma: EN 10277

Productos Calibrados de acero. Condiciones técnicas de suministro.

Norm:

Bright steel products. Technical delivery conditions.

Observaciones: BARRAS DE ACERO ESTRIADAS EN FRIO SIN ALEAR

DEPARTAMENTO DE CALIDAD: Certifica que el mencionado producto cumple con las especificaciones del pedido. QUALITY DEPARTMENT: Certify that the product fulfils the order specifications.

Fecha/Date: 08/06/2017

Firmado: Susana Fernández

Directora de Calidad



Sistema de Gestión SO 9001:2008

*							0-	
MATERIAL: NT-	414	00	RIRI	750		PO / BATCI	HNO.: <u>383</u> /	11/300941
DATE: 17	ful	13						
MATERIAL CERT REC'D:  QUANTITY RECEIVED:  QUANTITY INSPECTED:	4	2			THI	CKNESS ORDI	ERED: //	750
QUANTITY RECEIVED:	0 ,	5		5	THIC	CKNESS RECE	IVED: ).	750
OLIANTITY INSPECTED:	-	-		-				
QUANTITY REJECTED:				•				
QUANTITY REJECTED.					OHL	LI OILL INLOC		
	T	20						
DECORIDION		CR				COMMEN	ITS	
DESCRIPTION	,	eck (N)				COMMEN	110	
SURFACE DAMAGE		(W)						
CORRECT FINISH	(Y)	N						
CORROSION	Y	N						
CORRECT GRAIN DIRECTION	18	N						
CORRECT MATERIAL PER M-DRAWING	(Y)	N	AST	MI	419-	3		
CORRECT THICKNESS	(Y)	N						
PHOTO REQUIRED	Υ	0			, ,			
CORRECT REF # TO LINK CERT	(8)	N	11-	AI	# 14	16509	1	
CORRECT MATERIAL IDENTFICATION	-	N	MI	4/0	10 Q	T R1.75	2	
CORRECT M# ON THE MATERIAL	(8)	N	SDD	791x	)			
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Υ	A						
DOES THIS REQUIRE AN EXTRUSION REPORT	Υ	0						
CUT SAMPLE PIECI	F 0F	B A A *	FEDIAL A	ND DE	EFOR	MAA HARDNI	ESS CHECK	
CUT SAMPLE PIECE			ORD RES				233 CHLON.	
			HRC		RB	DURA	DUR D	WEBSTER
TYPE OF MATERIAL		_						
SIZE OF TEST SAMPLE								
HARDNESS / DUROMETER READI	NG							
	te	sters	located in	the Qua	lity Offic	ce		
QC 18 INSPECTION						ENGINEE	RING SIGNO	FF (if required)
20 10 INOI 20 NOIV	5	STATE OF						
INSPECTED BY:					SIG	NED OFF BY	·	
DATE: 17/11/	13					DATE	:	

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

MATERIAL: MT-V	141	12	P1.5	500	PO /	BATCH	NO.: 383	11/50094
MATERIAL CERT REC'D:  QUANTITY RECEIVED:  QUANTITY INSPECTED:  QUANTITY REJECTED:	ye 9			_ TH _ SH	IICKNESS IEET SIZE	RECEI ORDE	VED:/,	500 50b
DESCRIPTION	(Ch	CR neck (N)			CO	MMEN <sup>-</sup>	τs	
SURFACE DAMAGE	L	I/N						
CORRECT FINISH	M	N						
CORROSION	4	(N)						
CORRECT GRAIN DIRECTION	(Y)	N						
CORRECT MATERIAL PER M-DRAWING	M	N	15-	+MAK	12			
CORRECT THICKNESS	N	N	7531					
PHOTO REQUIRED	Y	(1)						
CORRECT REF # TO LINK CERT	8		142	EATH	41623	392		
CORRECT MATERIAL IDENTFICATION	7	N	MT	-414D B				
CORRECT M# ON THE MATERIAL	Š		8/0/	19411		. 500		
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF		N	7570					
DOES THIS REQUIRE AN								
EXTRUSION REPORT	Y	N						
CUT SAMPLE PIECI				ND PREFO		RDNE	SS CHECK.	
			HRC	HRB		RA	DUR D	WEBSTER
TYPE OF MATERIAL								
SIZE OF TEST SAMPLE		$\vdash$						
HARDNESS / DUROMETER READI	NG							
		sters	located in	the Quality O	ffice			-
QC 18 INSPECTION					ENC	SINEER	RING SIGNOR	FF (if required)

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

SIGNED OFF BY:

DATE:

INSPECTED BY:

MATERIAL: DATE:	1T-1	1141	OT-T	RD.X	5	PO / BATCH	NO.:383//	1/366940		
MATERIAL CERT REC'D:				-	THIC	KNESS ORDE	RED:	250		
QUANTITY INSPECTED:	-/	ni		-						
QUANTITY REJECTED:				-	SHEE	I SIZE RECEI	VED			
	,									
	20, 700	CR				0011115				
DESCRIPTION	1	eck (N)		COMMENTS						
SURFACE DAMAGE	Y	M								
CORRECT FINISH	(4)	N								
CORROSION	Y	N								
CORRECT GRAIN DIRECTION	(8)	N								
CORRECT MATERIAL PER M-DRAWING	(Y)	N	AST	MA	193					
CORRECT THICKNESS	N	N								
PHOTO REQUIRED	Y	(N)								
CORRECT REF # TO LINK CERT	(A)	N		T#M:						
CORRECT MATERIAL IDENTFICATION	(8)	N	MT-	4140	QT	R.750				
CORRECT M# ON THE MATERIAL	(8)	N	S00	9407						
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Υ	À,								
DOES THIS REQUIRE AN										
EXTRUSION REPORT	Y	N								
CUT SAMPLE PIECI	= 05	NAAT	redial A	ND DDE	EOP!	1 A HARDNE	SS CHECK			
COT SAMPLE PIECE			ORD RES				oo on Lor.			
			HRC	HRE		DUR A	DUR D	WEBSTER		
TYPE OF MATERIAL										
SIZE OF TEST SAMPLE										
HARDNESS / DUROMETER READI	NG									
		sters	located in	the Qualit	y Offic	<u> </u>				
QC 18 INSPECTION						ENGINEER	RING SIGNOF	FF (if required)		
INSPECTED BY:					SIGN	IED OFF BY:				
DATE: ) Z/U/	2			DATE:						
	-									

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

MATERIAL CERT REC'D:				-						
QUANTITY RECEIVED:  QUANTITY INSPECTED:  QUANTITY REJECTED:	2	D' D'		THIC SHE	THICKNESS ORDERED: 250 THICKNESS RECEIVED: 250 SHEET SIZE ORDERED: SHEET SIZE RECEIVED:					
DESCRIPTION	(Ch	CR eck			COMMEN	TS				
SURFACE DAMAGE	Y	N								
CORRECT FINISH	10	N								
CORROSION	Ý	(N)								
CORRECT GRAIN DIRECTION	(8)	N								
CORRECT MATERIAL PER M-DRAWIN	3 (Y)	N								
CORRECT THICKNESS	(Y)	N								
PHOTO REQUIRED	Y	(i)								
CORRECT REF # TO LINK CERT	(8)	N	HE	AT# S	20797	1402				
CORRECT MATERIAL IDENTFICATION		N	MIE	018 43.	0000.2	50				
CORRECT M# ON THE MATERIAL	(8)	N	300	9407						
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	(N)								
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	(2)								
CUT SAMPLE PIE				ND PREFOR		SS CHECK.				
			HRC	HRB	DURA	DUR D	WEBSTER			
TYPE OF MATERIAL										
SIZE OF TEST SAMPLE										
HARDNESS / DUROMETER REAL	DING									
HARDNESS / DURUMETER REAL		sters	located in	the Quality Office	<u>ce</u>	I				
QC 18 INSPECTION							FF (if required)			

INSPECTED BY: SIGNED OFF BY:

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

QC 18 INSPECTION

<b>Y</b>													
MATERIAL: MIOI	-	PO/BATCH NO.: 383///BD094											
MATERIAL: MIO	7/11	1/13		-									
							,	7-					
MATERIAL CERT REC'D:	QUANTITY RECEIVED: 19						THICKNESS ORDERED:						
QUANTITY RECEIVED:	QUANTITY RECEIVED: 79						THICKNESS RECEIVED:						
QUANTITY INSPECTED:	10.000 500 857 90.	SHEET SIZE ORDERED:											
QUANTITY REJECTED:													
				ie.									
		CR											
DESCRIPTION		eck				COMMEN	S						
		N)		MANUAL TO THE PARTY OF THE PART									
SURFACE DAMAGE		M											
CORRECT FINISH	(8)	N											
CORROSION	Y	N											
CORRECT GRAIN DIRECTION  CORRECT MATERIAL PER M-DRAWING	10	N	15	STM	1	ND							
CORRECT THICKNESS	(Y)	N	A.	5/6/	G/	88							
PHOTO REQUIRED	Y	N											
CORRECT REF # TO LINK CERT	0	N	147	EAT	# 1	39624							
CORRECT MATERIAL IDENTFICATION	(Y)	N	PIL	7/8R	102	5							
CORRECT M# ON THE MATERIAL	M	N	800	9409									
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	19											
DOES THIS REQUIRE AN EXTRUSION REPORT	Υ	N		•									
CUT SAMPLE PIECI	F OF	MA	TERIAL A	ND PRE	FORI	M A HARDNE	SS CHECK.						
001 07 1111 22 1 120			ORD RES										
			HRC	HR	В	DUR A	DUR D	WEBSTER					
TYPE OF MATERIAL													
SIZE OF TEST SAMPLE													
HARDNESS / DUROMETER READI	NG												
	<u>te</u>	sters	located in	the Quali	ty Offic	<u>e</u>							
QC 18 INSPECTION						ENGINEER	ING SIGNOF	F (if required)					
INSPECTED BY:					SIGN	NED OFF BY:							
DATE:				¥:		DATE:							
DATE.													

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

	>		0	
œ				00
			SP PU	
-			PURCHASE MAT SPECIFICATION: PART NUMBER: TOLERANCES:	2 ×
			MATERI TION: 3ER: ES:	
7			PURCHASE MATERIAL: AISI 1018-1025 ROUND BAR SPECIFICATION:  MIL-S-7097 OR ASTM A108  PART NUMBER:  M1018-R   D.D.D.D   WHERE D.I.  EG. 7/8" ROUND BAR = M101  TOLERANCES:  PER ASTM A108 AS FOLLOV  SIZE  UP TO 1.5" INCL. OVER 1.5" TO 2.5" INCL. OVER 4.0" TO 8.0" INCL. +0  OVER 4.0" TO 8.0" INCL. +0  OVER 6.0" TO 8.0" INCL. +0	4
			L: AISI 1018-1025 ROUND BAR  MIL-S-7097 OR ASTM A108  M1018-R D.DDD   WHERE D.DDD = DI/ DIA.  EG. 7/8" ROUND BAR = M1018-R0.875  PER ASTM A108 AS FOLLOWS:  SIZE UP TO 1.5" INCL. +0.000/-0.00  OVER 1.5" TO 2.5" INCL. +0.000/-0.00  OVER 4.0" TO 8.0" INCL. +0.000/-0.00  OVER 4.0" TO 8.0" INCL. +0.000/-0.00	
			ASTM A AS	
6			BAR 108 M1018-R M1018-R LLOWS: 10,000 +0,000 +0,000 +0,000	SPE
		R.625	AISI 1018-1025 ROUND BAR  MIL-S-7097 OR ASTM A108  M1018-R D.DDD WHERE D.DDD = DIAMETER IN INCHES DIA.  EG. 7/8" ROUND BAR = M1018-R0.875  PER ASTM A108 AS FOLLOWS:  SIZE UP TO 1.5" INCL. UP TO 1.5" INCL. OVER 1.5" TO 2.5" INCL. OVER 1.6" TO 3.0" INCL. OVER 4.0" TO 8.0" INCL. OVER 6.0" TO 8.0" INCL.	SPECIFICATION CONTROL DRAWING
		2	E E E	CAT
5		T	NCHES	NON
				CON
				ITRC
4				WAS
ω				
	8 REF A NEW REV. DESIGN DRAWN CHECKED DE APPR. DE APPR. DATE DATE 12			
-	NEW ISSUE  D. C.			
	DS DS DS			
2	REFORMAT, ADD ASTM A108, ADD TOLERANCES  NEW ISSUE  DESCRIPTION  DS  CP  CP  DBAWING NO.  DBAWING NO.  DBAWING NO.  DBAWING NO.  TITLE  12.09.05  TOTAL OCCUPATION OF THE CONTROL OF THE C			N .
	TOLERANCE  A  DART A  HAWKESBL  (O.  POPPRIGHT 6)  DOPPRIGHT 60  DOPPRIG	201		
	A108, ADD TOLERANCES  A108, ADD TOLERANCES  BY  CONTROL	2012-09-24		
-	ANACE BANACE			-,-
	12.08.05 01.06.12 DATE TD DA REV. B SHEET 1 OF 1 SCALE NTS LTD			7.2
1			0	

n

MATERIAL: <u>MID /8</u> DATE: <u>17</u>	B.	37	SX5.	00		PO / BATCH	NO.: <u>383//</u>	1.500941
MATERIAL CERT REC'D:  QUANTITY RECEIVED:  QUANTITY INSPECTED:  QUANTITY REJECTED:		SHEET	SIZE ORDE	RED:	75 75			
DESCRIPTION	(Ch	CR leck (N)				COMMEN	TS	
SURFACE DAMAGE	Y	(0)						
CORRECT FINISH	(Y)							
CORROSION	Y	N						
CORRECT GRAIN DIRECTION	8	N						
CORRECT MATERIAL PER M-DRAWING	(8)	N						
CORRECT THICKNESS	(Y)	N						
PHOTO REQUIRED	Y	(1)				- 60		
CORRECT REF # TO LINK CERT	(8)	N	171			01503		
CORRECT MATERIAL IDENTFICATION		N	1111	- Indiana de la constitución de	.375	5x5.00		
CORRECT M# ON THE MATERIAL	8	N	301	29408				
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Υ	8						
DOES THIS REQUIRE AN EXTRUSION REPORT	Υ	(1)		•				
CUT SAMPLE PIECI			TERIAL A			A HARDNE	SS CHECK.	
			HRC	HRE		DUR A	DUR D	WEBSTER
TYPE OF MATERIAL				13 2000				
SIZE OF TEST SAMPLE								
HARDNESS / DUROMETER READI	NG							
QC 18 INSPECTION	<u>te</u>	esters	located in	the Qualit	y Office	ENGINEER	RING SIGNOF	F (if required)
INSPECTED BY:	ī				SIGNE	ED OFF BY:		

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

DATE:





DESIG	DRAWN BY	DART AEROSP	
CHEC	KED APPROVED	DRAWING NO. MICIO-B	REV. A
DATE	01.12.06	AIST 1010-1025 BAR	SCALE NTS
A	01.12.06	NEW ISSUE	

PURCHASE MATERIAL: AIST 1010-1025 OR ASTM A36 /A366 /A569 /A570
OR CSA G40-21, 38W/44W/50W/60W/70W

PART NUMBER:

MIDIO-BIT. TIT X WW. WWW WHERE T.TIT = THICKNESS (IN INCHES)
THICK WIDTH WIDTH (IN INCHES)

EG. 0.75" x 250" BAR = M1010-B0.750 x 02.500

375 X 5,00

